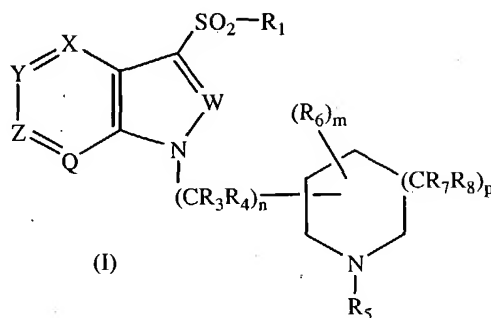


What is claimed is:

1. A compound of formula I



5

wherein

W is N or CR<sub>2</sub>;

X is N or CR<sub>9</sub>;

Y is N or CR<sub>10</sub>;

10

Z is N or CR<sub>11</sub>;

Q is N or CR<sub>12</sub> with the proviso that at least one and not more than two of X, Y, Z and Q must be N;

15

R<sub>1</sub> is an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl, or heteroaryl group or an optionally substituted 8- to 13-membered bicyclic or tricyclic ring system having a N atom at the bridgehead and optionally containing 1, 2 or 3 additional heteroatoms selected from N, O or S;

R<sub>2</sub> is H, halogen, or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl or heteroaryl group each optionally substituted;

20

R<sub>3</sub> and R<sub>4</sub> are each independently H or an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl group;

R<sub>5</sub> is H or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

R<sub>6</sub> is a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl or C<sub>2</sub>-C<sub>6</sub>alkynyl group each optionally substituted;

25

R<sub>7</sub> and R<sub>8</sub> are each independently H or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl or C<sub>2</sub>-C<sub>6</sub>alkynyl group each optionally substituted;

m and n are each independently 0 or an integer of 1, 2 or 3;

p is 0 or an integer of 1 or 2;

$R_9$ ,  $R_{10}$ ,  $R_{11}$  and  $R_{12}$  are each independently H, halogen, CN,  $\text{OCO}_2R_{13}$ ,  $\text{CO}_2R_{14}$ ,  $\text{CONR}_{15}R_{16}$ ,  $\text{SO}_xR_{17}$ ,  $\text{NR}_{18}R_{19}$ ,  $\text{OR}_{20}$ ,  $\text{COR}_{21}$  or a  $\text{C}_1\text{-C}_6$ alkyl,  $\text{C}_2\text{-C}_6$ alkenyl,  $\text{C}_2\text{-C}_6$ alkynyl,  $\text{C}_3\text{-C}_7$ cycloalkyl, aryl or heteroaryl group each optionally substituted;

$R_{13}$ ,  $R_{14}$ ,  $R_{17}$  and  $R_{21}$  are each independently H or a  $\text{C}_1\text{-C}_6$ alkyl,  $\text{C}_2\text{-C}_6$ alkenyl,  $\text{C}_2\text{-C}_6$ alkynyl,  $\text{C}_3\text{-C}_6$ cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

$R_{15}$ ,  $R_{16}$ ,  $R_{18}$  and  $R_{19}$  are each independently H or an optionally substituted  $\text{C}_1\text{-C}_4$ alkyl group or  $R_{15}$  and  $R_{16}$  or  $R_{18}$  and  $R_{19}$  may be taken together with the atom to which they are attached to form a 5- to 7-membered ring optionally containing another heteroatom selected from O,  $\text{NR}_{22}$  or  $\text{SO}_q$ ;

$R_{20}$  is a  $\text{C}_1\text{-C}_6$ alkyl,  $\text{C}_2\text{-C}_6$ alkenyl,  $\text{C}_2\text{-C}_6$ alkynyl,  $\text{C}_3\text{-C}_7$ cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

$x$  and  $q$  are each independently 0 or an integer of 1 or 2; and

$R_{22}$  is H or a  $\text{C}_1\text{-C}_6$ alkyl,  $\text{C}_2\text{-C}_6$ alkenyl,  $\text{C}_2\text{-C}_6$ alkynyl,  $\text{C}_3\text{-C}_7$ cycloalkyl, cycloheteroalkyl, aryl or heteraryl group each optionally substituted; or the stereoisomers thereof or the pharmaceutically acceptable salts thereof.

2. The compound according to claim 1 wherein  $n$  is 0 or 1.
3. The compound according to claim 1 wherein  $R_5$  is H or methyl.
4. The compound according to claim 1 wherein  $R_1$  is an optionally substituted phenyl, thienyl or imidazothiazolyl group.
5. The compound according to claim 2 wherein  $p$  is 0 or 1.
6. The compound according to claim 2 wherein  $m$  is 0.
7. The compound according to claim 5 wherein the piperidinyl group is attached in the 3-position of the piperidine ring or the pyrrolidinyl group is attached in the 2-position of the pyrrolidine ring.

8. The compound according to claim 7 wherein R<sub>5</sub> is H or methyl and R<sub>1</sub> is an optionally substituted phenyl, thienyl or imidazothiazolyl group.

9. The compound according to claim 1 selected from the group
- 5 consisting of:
- 3-(phenylsulfonyl)-1-[(2R)-pyrrolidin-2-ylmethyl]-1H-pyrrolo[2,3-b]pyridine;  
 3-(phenylsulfonyl)-1-[(2S)-pyrrolidin-2-ylmethyl]-1H-pyrrolo[2,3-b]pyridine;  
 3-[(4-methylphenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 6-bromo-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;  
 10 4-chloro-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrazolo[4,3-b]pyridine;  
 7-methoxy-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;  
 6-hydroxy-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;  
 6-chloro-3-[(4-fluorophenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-  
 c]pyridine;  
 15 6-fluoro-3-[(3-fluorophenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;  
 5-chloro-3-[(3-chlorophenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-  
 c]pyridine;  
 3-[(2-chlorophenyl)sulfonyl]-6-fluoro-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-  
 c]pyridine;  
 20 3-[(2-fluorophenyl)sulfonyl]-6-methoxy-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-  
 b]pyridine;  
 4-chloro-3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 7-methoxy-3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;  
 6-hydroxy-3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;  
 25 6-chloro-3-[(4-fluorophenyl)sulfonyl]-1-(piperidin-2-ylmethyl)-1H-pyrrolo[3,2-  
 c]pyridine;  
 6-fluoro-3-[(3-fluorophenyl)sulfonyl]-1-(piperidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 5-chloro-3-[(3-chlorophenyl)sulfonyl]-1-(piperidin-2-ylmethyl)-1H-pyrrolo[2,3-  
 c]pyridine;  
 30 3-[(2-chlorophenyl)sulfonyl]-6-fluoro-1-(piperidin-2-ylmethyl)-1H-pyrrolo[3,2-  
 b]pyridine;  
 3-[(2-fluorophenyl)sulfonyl]-6-methoxy-1-(piperidin-2-ylmethyl)-1H-pyrrolo[3,2-  
 c]pyridine;

- 3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrazolo[4,3-b]pyridine;  
 3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrazolo[4,3-c]pyridine;  
 3-(phenylsulfonyl)-1-(piperidin-2-ylmethyl)-1H-pyrazolo[4,3-b]pyridine;  
 3-(phenylsulfonyl)-1-(pyrrolidin-3-ylmethyl)-1H-pyrazolo[3,4-c]pyridine;  
 5 3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrazolo[3,4-b]pyridine;  
 6-bromo-3-(phenylsulfonyl)-1-(pyrrolidin-3-ylmethyl)-1H-pyrrolo[3,2-c]pyridine;  
 4-chloro-2-methyl-3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 7-methoxy-3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;  
 10 6-hydroxy-3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;  
 1-(piperidin-2-ylmethyl)-3-(2-pyridinylsulfonyl)-1H-pyrrolo[3,2-c]pyridine;  
 1-(piperidin-3-ylmethyl)-3-(2-pyridinylsulfonyl)-1H-pyrrolo[2,3-b]pyridine;  
 3-(2-pyridinylsulfonyl)-1-(pyrrolidin-3-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;  
 1-(piperidin-3-ylmethyl)-3-(2-thienylsulfonyl)-1H-pyrazolo[4,3-b]pyridine;  
 15 1-(piperidin-2-ylmethyl)-3-(2-thienylsulfonyl)-1H-pyrazolo[4,3-b]pyridine;  
 3-(phenylsulfonyl)-1-piperidin-3-yl-1H-pyrazolo[4,3-b]pyridine;  
 3-[(2-fluorophenyl)sulfonyl]-1-pyrrolidin-3-yl-1H-pyrazolo[4,3-b]pyridine;  
 1-(1-methylpiperidin-4-yl)-3-(phenylsulfonyl)-1H-pyrazolo[4,3-b]pyridine;  
 1-(1-phenethylpyrrolidin-3-yl)-3-(phenylsulfonyl)-1H-pyrrolo[3,2-c]pyridine;  
 20 1-piperidin-4-yl-3-(2-pyridylsulfonyl)-1H-pyrrolo[2,3-c]pyridine;  
 1-piperidin-3-yl-3-(2-thienylsulfonyl)-1H-pyrrolo[3,2-b]pyridine;  
 1-pyrrolidin-3-yl-3-(3-thienylsulfonyl)-1H-pyrrolo[3,2-b]pyridine;  
 1-[(1-benzylpyrrolidin-2-yl)methyl]-3-(phenylsulfonyl)-1H-pyrrolo[2,3-b]pyridine;  
 3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 25 1-[(1-benzylpyrrolidin-2-yl)methyl]-3-(3-fluorophenylsulfonyl)-1H-pyrrolo[2,3-b]-  
 pyridine;  
 3-(3-fluorophenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 1-[(1-benzylpyrrolidin-2-yl)methyl]-3-(3-chlorophenylsulfonyl)-1H-pyrrolo[2,3-b]-  
 pyridine;  
 30 3-(3-chlorophenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 3-(3-chlorophenylsulfonyl)-1-[(1-methylpyrrolidin-2-yl)methyl]-1H-pyrrolo[2,3-b]pyridine;

3-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;

3-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-1-(1-methylpiperidin-3-yl)-1H-pyrrolo[2,3-b]pyridine;

5 3-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-1-(piperidin-3-yl)-1H-pyrrolo[2,3-b]pyridine;

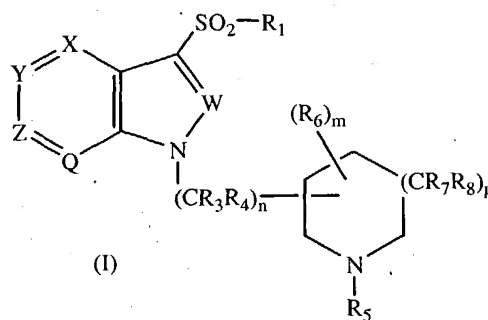
3-[(6-chlorothien-2-yl)sulfonyl]-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;

the stereoisomers thereof; and

the pharmaceutically acceptable salts thereof.

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10. A method for the treatment of a central nervous system disorder related to or affected by the 5-HT<sub>6</sub> receptor in a patient in need thereof which comprises providing to said patient a therapeutically effective amount of a compound of formula I



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wherein

W is N or CR<sub>2</sub>;

X is N or CR<sub>9</sub>;

Y is N or CR<sub>10</sub>;

20

Z is N or CR<sub>11</sub>;

Q is N or CR<sub>12</sub> with the proviso that at least one and not more than two of X, Y, Z and Q must be N;

R<sub>1</sub> is an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl, or heteroaryl group or an optionally substituted 8- to 13-membered bicyclic or tricyclic ring system having a N atom at the bridgehead and optionally containing 1, 2 or 3 additional heteroatoms selected from N, O or S;

25

R<sub>2</sub> is H, halogen, or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl or heteroaryl group each optionally substituted;

R<sub>3</sub> and R<sub>4</sub> are each independently H or an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl group;

R<sub>5</sub> is H or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

5 R<sub>6</sub> is a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl or C<sub>2</sub>-C<sub>6</sub>alkynyl group each optionally substituted;

R<sub>7</sub> and R<sub>8</sub> are each independently H or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl or C<sub>2</sub>-C<sub>6</sub>alkynyl group each optionally substituted;

m and n are each independently 0 or an integer of 1, 2 or 3;

10 p is 0 or an integer of 1 or 2;

R<sub>9</sub>, R<sub>10</sub>, R<sub>11</sub> and R<sub>12</sub> are each independently H, halogen, CN, OCO<sub>2</sub>R<sub>13</sub>, CO<sub>2</sub>R<sub>14</sub>, CONR<sub>15</sub>R<sub>16</sub>, SO<sub>x</sub>R<sub>17</sub>, NR<sub>18</sub>R<sub>19</sub>, OR<sub>20</sub>, COR<sub>21</sub> or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl or heteroaryl group each optionally substituted;

15 R<sub>13</sub>, R<sub>14</sub>, R<sub>17</sub> and R<sub>21</sub> are each independently H or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

R<sub>15</sub>, R<sub>16</sub>, R<sub>18</sub> and R<sub>19</sub> are each independently H or an optionally substituted C<sub>1</sub>-C<sub>4</sub>alkyl group or R<sub>15</sub> and R<sub>16</sub> or R<sub>18</sub> and R<sub>19</sub> may be taken together with the atom to which they are attached to form a 5- to 7-membered ring optionally containing another heteroatom selected from O, NR<sub>22</sub> or SO<sub>q</sub>;

20 R<sub>20</sub> is a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

25 x and q are each independently 0 or an integer of 1 or 2; and

R<sub>22</sub> is H or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, cycloheteroalkyl, aryl or heteraryl group each optionally substituted; or

the stereoisomers thereof or the pharmaceutically acceptable salts thereof.

30 11. The method according to claim 10 wherein said disorder is a motor disorder, anxiety disorder or cognitive disorder.

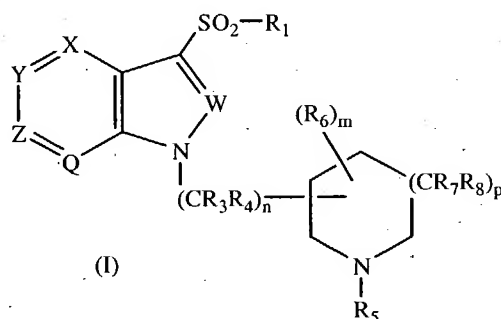
12. The method according to claim 10 wherein said disorder is a neurodegenerative disorder.

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13. The method according to claim 11 wherein said disorder is selected from the group consisting of: attention deficit disorder; obsessive compulsive disorder; and withdrawal from drug, alcohol or nicotine addiction.

14. The method according to claim 12 wherein said disorder is stroke or head trauma.

15. A pharmaceutical composition which comprises a pharmaceutically acceptable carrier and an effective amount of a compound of formula I



wherein

W is N or CR<sub>2</sub>;

X is N or CR<sub>9</sub>;

Y is N or CR<sub>10</sub>;

Z is N or CR<sub>11</sub>;

Q is N or CR<sub>12</sub> with the proviso that at least one and not more than two of X, Y, Z and Q must be N;

R<sub>1</sub> is an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl, or heteroaryl group or an optionally substituted 8- to 13-membered bicyclic or tricyclic ring system having a N atom at the bridgehead and optionally containing 1, 2 or 3 additional heteroatoms selected from N, O or S;

R<sub>2</sub> is H, halogen, or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl or heteroaryl group each optionally substituted;

R<sub>3</sub> and R<sub>4</sub> are each independently H or an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl group;

R<sub>5</sub> is H or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

$R_6$  is a  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_7$ cycloalkyl,  $C_2$ - $C_6$ alkenyl or  $C_2$ - $C_6$ alkynyl group each optionally substituted;

$R_7$  and  $R_8$  are each independently H or a  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_7$ cycloalkyl,  $C_2$ - $C_6$ alkenyl or  $C_2$ - $C_6$ alkynyl group each optionally substituted;

5  $m$  and  $n$  are each independently 0 or an integer of 1, 2 or 3;

$p$  is 0 or an integer of 1 or 2;

$R_9$ ,  $R_{10}$ ,  $R_{11}$  and  $R_{12}$  are each independently H, halogen, CN,  $OCO_2R_{13}$ ,  $CO_2R_{14}$ ,  $CONR_{15}R_{16}$ ,  $SO_xR_{17}$ ,  $NR_{18}R_{19}$ ,  $OR_{20}$ ,  $COR_{21}$  or a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_7$ cycloalkyl, aryl or heteroaryl group each optionally substituted;

10  $R_{13}$ ,  $R_{14}$ ,  $R_{17}$  and  $R_{21}$  are each independently H or a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_6$ cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

$R_{15}$ ,  $R_{16}$ ,  $R_{18}$  and  $R_{19}$  are each independently H or an optionally substituted  $C_1$ - $C_4$ alkyl group or  $R_{15}$  and  $R_{16}$  or  $R_{18}$  and  $R_{19}$  may be taken together with the atom to which they are attached to form a 5- to 7-membered ring optionally containing another heteroatom selected from O,  $NR_{22}$  or  $SO_q$ ;

15  $R_{20}$  is a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_7$ cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;

20  $x$  and  $q$  are each independently 0 or an integer of 1 or 2; and

$R_{22}$  is H or a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_7$ cycloalkyl, cycloheteroalkyl, aryl or heteraryl group each optionally substituted; or

the stereoisomers thereof or the pharmaceutically acceptable salts thereof.

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16. The composition according to claim 15 having a formula I compound wherein  $n$  is 0 or 1.

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17. The composition according to claim 16 having a formula I compound wherein  $R_1$  is an optionally substituted phenyl, thienyl or imidazothiazolyl group and  $R_5$  is H or methyl.

18. The composition according to claim 17 having a formula I compound wherein  $p$  is 0 or 1 and the piperidinyl group is attached in the 3-position of the



piperidine ring or the pyrrolidinyl group is attached in the 2-position of the pyrrolidine ring.

19. The composition according to claim 15 having a formula I compound
- 5 selected from the group consisting of:
- 3-(phenylsulfonyl)-1-[(2R)-pyrrolidin-2-ylmethyl]-1H-pyrrolo[2,3-b]pyridine;
  - 3-(phenylsulfonyl)-1-[(2S)-pyrrolidin-2-ylmethyl]-1H-pyrrolo[2,3-b]pyridine;
  - 3-[(4-methylphenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;
  - 6-bromo-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;
  - 10 4-chloro-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrazolo[4,3-b]pyridine;
  - 7-methoxy-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;
  - 6-hydroxy-3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;
  - 6-chloro-3-[(4-fluorophenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;
  - 15 6-fluoro-3-[(3-fluorophenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;
  - 5-chloro-3-[(3-chlorophenyl)sulfonyl]-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-c]pyridine;
  - 3-[(2-chlorophenyl)sulfonyl]-6-fluoro-1-(piperidin-4-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;
  - 20 3-[(2-fluorophenyl)sulfonyl]-6-methoxy-1-(piperidin-4-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;
  - 4-chloro-3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;
  - 7-methoxy-3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;
  - 6-hydroxy-3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;
  - 25 6-chloro-3-[(4-fluorophenyl)sulfonyl]-1-(piperidin-2-ylmethyl)-1H-pyrrolo[3,2-c]pyridine;
  - 6-fluoro-3-[(3-fluorophenyl)sulfonyl]-1-(piperidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;
  - 5-chloro-3-[(3-chlorophenyl)sulfonyl]-1-(piperidin-2-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;
  - 30 3-[(2-chlorophenyl)sulfonyl]-6-fluoro-1-(piperidin-2-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;
  - 3-[(2-fluorophenyl)sulfonyl]-6-methoxy-1-(piperidin-2-ylmethyl)-1H-pyrrolo[3,2-c]pyridine;

- 3-(phenylsulfonyl)-1-(piperidin-4-ylmethyl)-1H-pyrazolo[4,3-b]pyridine;  
 3-(phenylsulfonyl)-1-(piperidin-3-ylmethyl)-1H-pyrazolo[4,3-c]pyridine;  
 3-(phenylsulfonyl)-1-(piperidin-2-ylmethyl)-1H-pyrazolo[4,3-b]pyridine;  
 3-(phenylsulfonyl)-1-(pyrrolidin-3-ylmethyl)-1H-pyrazolo[3,4-c]pyridine;  
 5 3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrazolo[3,4-b]pyridine;  
 6-bromo-3-(phenylsulfonyl)-1-(pyrrolidin-3-ylmethyl)-1H-pyrrolo[3,2-c]pyridine;  
 4-chloro-2-methyl-3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 7-methoxy-3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;  
 10 6-hydroxy-3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[3,2-b]pyridine;  
 1-(piperidin-2-ylmethyl)-3-(2-pyridinylsulfonyl)-1H-pyrrolo[3,2-c]pyridine;  
 1-(piperidin-3-ylmethyl)-3-(2-pyridinylsulfonyl)-1H-pyrrolo[2,3-b]pyridine;  
 3-(2-pyridinylsulfonyl)-1-(pyrrolidin-3-ylmethyl)-1H-pyrrolo[2,3-c]pyridine;  
 1-(piperidin-3-ylmethyl)-3-(2-thienylsulfonyl)-1H-pyrazolo[4,3-b]pyridine;  
 15 1-(piperidin-2-ylmethyl)-3-(2-thienylsulfonyl)-1H-pyrazolo[4,3-b]pyridine;  
 3-(phenylsulfonyl)-1-piperidin-3-yl-1H-pyrazolo[4,3-b]pyridine;  
 3-[(2-fluorophenyl)sulfonyl]-1-pyrrolidin-3-yl-1H-pyrazolo[4,3-b]pyridine;  
 1-(1-methylpiperidin-4-yl)-3-(phenylsulfonyl)-1H-pyrazolo[4,3-b]pyridine;  
 1-(1-phenethylpyrrolidin-3-yl)-3-(phenylsulfonyl)-1H-pyrrolo[3,2-c]pyridine;  
 20 1-piperidin-4-yl-3-(2-pyridylsulfonyl)-1H-pyrrolo[2,3-c]pyridine;  
 1-piperidin-3-yl-3-(2-thienylsulfonyl)-1H-pyrrolo[3,2-b]pyridine;  
 1-pyrrolidin-3-yl-3-(3-thienylsulfonyl)-1H-pyrrolo[3,2-b]pyridine;  
 1-[(1-benzylpyrrolidin-2-yl)methyl]-3-(phenylsulfonyl)-1H-pyrrolo[2,3-b]pyridine;  
 3-(phenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 25 1-[(1-benzylpyrrolidin-2-yl)methyl]-3-(3-fluorophenylsulfonyl)-1H-pyrrolo[2,3-b]-pyridine;  
 3-(3-fluorophenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 1-[(1-benzylpyrrolidin-2-yl)methyl]-3-(3-chlorophenylsulfonyl)-1H-pyrrolo[2,3-b]-pyridine;  
 30 3-(3-chlorophenylsulfonyl)-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;  
 3-(3-chlorophenylsulfonyl)-1-[(1-methylpyrrolidin-2-yl)methyl]-1H-pyrrolo[2,3-b]pyridine;

3-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-1-(1-methylpiperidin-3-yl)-1H-pyrrolo[2,3-b]pyridine;

3-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-1-(piperidin-3-yl)-1H-pyrrolo[2,3-b]pyridine;

5 3-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;

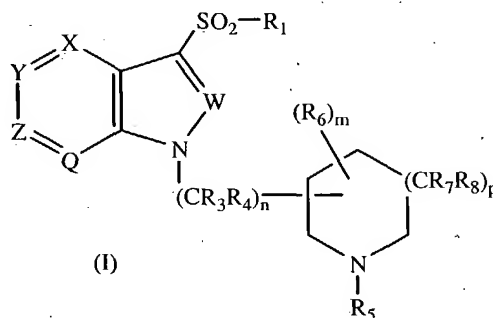
3-[(6-chlorothiophen-2-yl)sulfonyl]-1-(pyrrolidin-2-ylmethyl)-1H-pyrrolo[2,3-b]pyridine;

the stereoisomers thereof; and

the pharmaceutically acceptable salts thereof.

10

20. A process for the preparation of a compound of formula I



wherein

15

W is N or CR<sub>2</sub>;

X is N or CR<sub>9</sub>;

Y is N or CR<sub>10</sub>;

Z is N or CR<sub>11</sub>;

Q is N or CR<sub>12</sub> with the proviso that at least one and not more than two of X,

20

Y, Z and Q must be N;

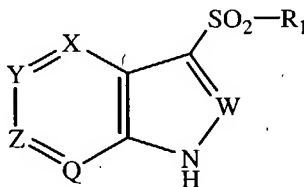
R<sub>1</sub> is an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl, or heteroaryl group or an optionally substituted 8- to 13-membered bicyclic or tricyclic ring system having a N atom at the bridgehead and optionally containing 1, 2 or 3 additional heteroatoms selected from N, O or S;

25

R<sub>2</sub> is H, halogen, or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, aryl or heteroaryl group each optionally substituted;

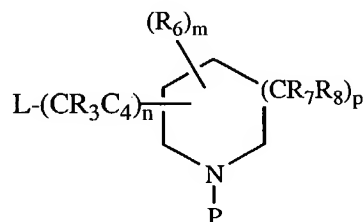
R<sub>3</sub> and R<sub>4</sub> are each independently H or an optionally substituted C<sub>1</sub>-C<sub>6</sub>alkyl group;

- $R_5$  is H or a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_7$ cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;  
 $R_6$  is a  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_7$ cycloalkyl,  $C_2$ - $C_6$ alkenyl or  $C_2$ - $C_6$ alkynyl group each optionally substituted;  
 5  $R_7$  and  $R_8$  are each independently H or a  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_7$ cycloalkyl,  $C_2$ - $C_6$ alkenyl or  $C_2$ - $C_6$ alkynyl group each optionally substituted;  
 $m$  and  $n$  are each independently 0 or an integer of 1, 2 or 3;  
 $p$  is 0 or an integer of 1 or 2;  
 $R_9$ ,  $R_{10}$ ,  $R_{11}$  and  $R_{12}$  are each independently H, halogen, CN,  $OCO_2R_{13}$ ,  
 10  $CO_2R_{14}$ ,  $CONR_{15}R_{16}$ ,  $SO_xR_{17}$ ,  $NR_{18}R_{19}$ ,  $OR_{20}$ ,  $COR_{21}$  or a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_7$ cycloalkyl, aryl or heteroaryl group each optionally substituted;  
 $R_{13}$ ,  $R_{14}$ ,  $R_{17}$  and  $R_{21}$  are each independently H or a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_6$ cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group  
 15 each optionally substituted;  
 $R_{15}$ ,  $R_{16}$ ,  $R_{18}$  and  $R_{19}$  are each independently H or an optionally substituted  $C_1$ - $C_4$ alkyl group or  $R_{15}$  and  $R_{16}$  or  $R_{18}$  and  $R_{19}$  may be taken together with the atom to which they are attached to form a 5- to 7-membered ring optionally containing another heteroatom selected from O,  $NR_{22}$   
 20 or  $SO_q$ ;  
 $R_{20}$  is a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_7$ cycloalkyl, cycloheteroalkyl, aryl or heteroaryl group each optionally substituted;  
 $x$  and  $q$  are each independently 0 or an integer of 1 or 2; and  
 $R_{22}$  is H or a  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl,  $C_3$ - $C_7$ cycloalkyl,  
 25 cycloheteroalkyl, aryl or heteraryl group each optionally substituted  
 which process comprises reacting a compound of formula II



(II)

wherein W, X, Y, Z and Q are described hereinabove with a protected azacyclic compound of formula III



(III)

5

wherein L represents a leaving group; P represents a protecting group and  $R_3$ ,  $R_4$ ,  $R_6$ ,  $R_7$ ,  $R_8$ ,  $n$ ,  $m$  and  $p$  are as described hereinabove in the presence of a first base to give the protected amine of formula I; and deprotecting said amine to give the compound of formula I wherein  $R_5$  is H optionally alkylating said formula I compound with a compound,  $R_5-L'$ , wherein  $L'$  is a leaving group in the presence of a second base.

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